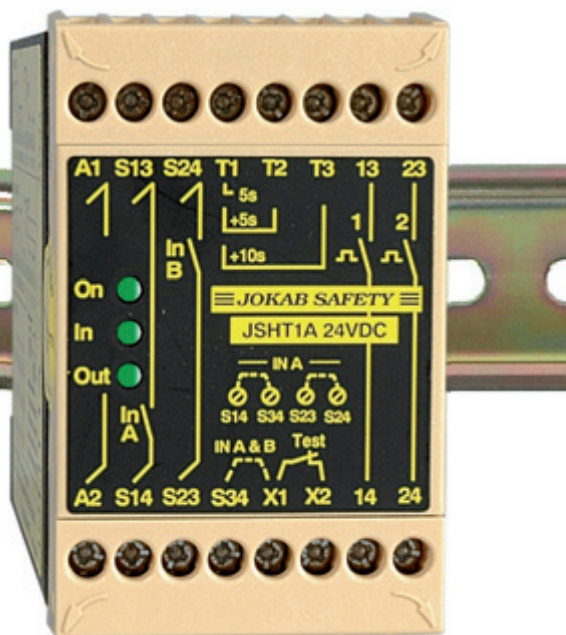


Safety timer JSHT1



The JSHT1A/B closes two independent relay outputs during a guaranteed maximum time when the inputs are opened.

Time reset

Time reset can prevent unintentional reset of safety systems when someone is still in the dangerous area of the machine. During a guaranteed maximum time, one or several PB's for reset must be activated. The reset buttons should be sited in such a way that operatives have a clear overview of the whole area which is guarded. Time reset is made by the combination of a safety relay and the timer relay JSHT1A/B.

Time bypassing

The JSHT1 can also be used for time bypass of light beams for e.g. autotruck into a dangerous area.

Operation

When the inputs open the output contacts close. The output contacts open when the inputs close or when the time period has expired. The time period is hardwire selectable on terminals T1, T2 and T3. The time given is the maximum time. One or two channel operation is also hardwire selectable.

Regulations and standards

The JSHT1A/B is designed and approved in accordance with appropriate directives and standards. Examples of such are 98/37/EC, EN ISO 12100-1/-2, EN 60204-1, EN 954-1/EN ISO 13849-1.

Approvals:



Safety timer for:

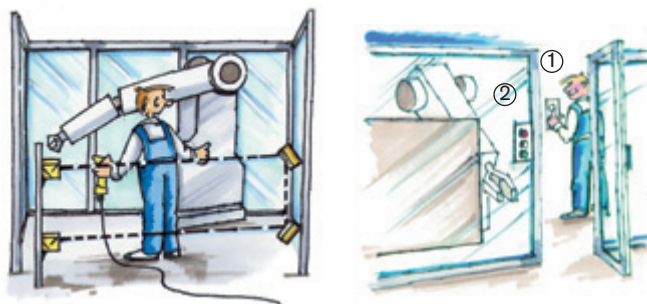
- Time reset
- Time bypassing

Features:

- Hardwire time selection 5 – 40 s
- Selectable single or dual channel input
- Test input
- Width 45 mm
- LED indication for supply, inputs and outputs
- 1+1 NO relay outputs
- Supply 24 VDC, 24, 48, 115 or 230 VAC
- Quick release connector blocks

Connection examples

For examples of how our safety relays can solve various safety problems, please see the section "Connection examples".

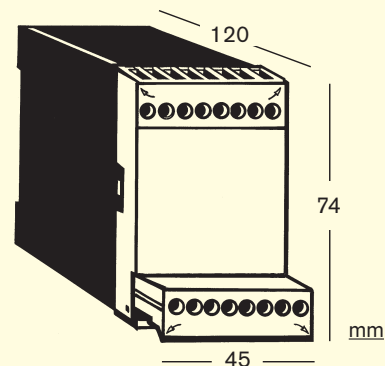


Light beam being bypassed for a maximum pre-set time e.g. 5 sec. by the JSHT1 during entrance and exit with the JSHD4 Three Position Enabling device.

Time reset procedure. First push PB1, then exit dangerous area and close the door, then push PB2 (PB1 and PB2 must be pressed within the predetermined time period selected). After this procedure the machine can be safely restarted.

Technical data - JSHT1 A/B

Manufacturer:	JOKAB SAFETY AB, Sweden
Colour:	Black and Beige
Power supply:	24 VDC \pm 15 %, 24/48/115/230 VAC \pm 15 %, 50 - 60 Hz (AC versions JSHT1A only)
Power consumption:	< 3 VA
Max Input Wire res. at nom voltage/channel:	100/200 Ohm (1 Channel/ 2 Channel))
Response time at activation:	< 30 ms
Response time at deactivation:	< 15 ms
Selectable time(\pm 15 % at nom. v.):	JSHT1A: 5-10-15-20 sec JSHT1B: 5-15-30-40 sec
Relay outputs:	2 x 1 NO
Maximum switching capacity res. load AC:	4A/250 VAC/1000 VA
Maximum switching capacity res. load DC:	4A/24 VDC/100 W
Max. total switching capacity:	8A distributed on all contacts
Minimum load:	10mA/10 V (if load on contact has not exceeded 100 mA)
Contact material:	AgCuNi
Terminals (Max. screw torque 1 Nm):	Single strand: 1x4 mm ² /2x1.5 mm ² Conductor with socket contact: 1x2.5 mm ² /2x1 mm ²
Mounting:	35 mm DIN-rail
Protection class enclosure/terminals:	IP20/IP40 IEC 60529
Operating temperature range:	-10°C - +55°C
Air and creep distance:	4 kV/2 IEC 60664-1
LED indication:	Electrical Supply, Inputs, Outputs
Weight:	24 VDC: 330 g 24/48/115/230 VAC: 430 g

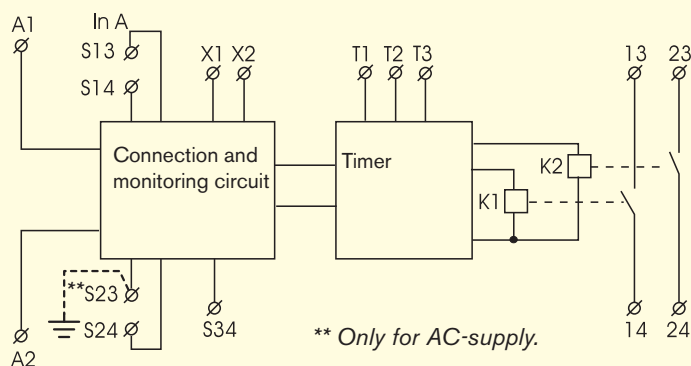


Connector blocks are detachable (without cables having to be disconnected)

Article number/Ordering data

10-011-00	JSHT1A 24DC
10-011-02	JSHT1A 24AC
10-011-03	JSHT1A 48AC
10-011-04	JSHT1A 115AC
10-011-05	JSHT1A 230AC
10-011-10	JSHT1B 24DC

Technical description - JSHT1 A/B



The electrical supply is connected across A1 and A2. The internal supervising circuit is activated directly when the supply is on. The inputs A and B must both be closed and then opened. Thereafter K1 and K2

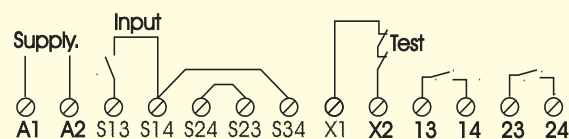
are activated and the outputs close. K1 and K2 are activated for the hardwired selected time (set by connections on the terminals T1, T2 and T3). If there is a short circuit between the inputs or the inputs

are closed again before the set time period has expired the outputs will open. In order to close the outputs again both the inputs have to be closed and both internal relays K1 and K2 deactivated (controlled by the supervising circuit) and the inputs again opened.

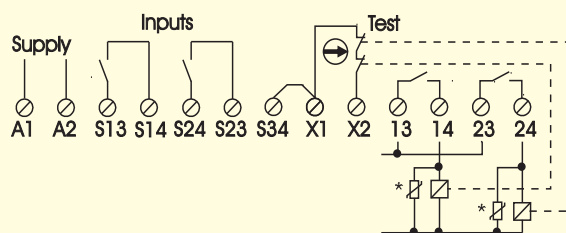
By external hardwire connections the JSHT1 can be made single or dual channel input. See figure below.

Electrical connection - JSHT1 A/B

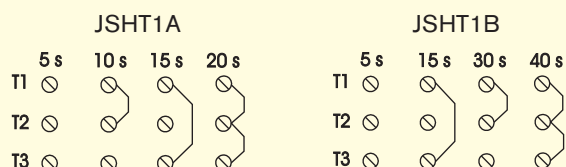
Connection for single channel input



Connection for dual channel input



Selection of time by hardwire links



* It is recommended that all switched loads are adequately suppressed and/or fused in order to provide additional protection for the safety contacts. In the figure the monitoring of two contactors in the test input is shown.